CLASSIFIED MESSAGE

SECRET

ROUTING

1	CDD	4	COD
2		5	"
3		6	MD

CD RB

ZE9D

ROUTINE

DATE 0515Z 18 JUL 62

25X1 :

FROM :

ACTION: OSA (1-2-3-4-5-6-7-8-9-10)

INFO : S/C (11)

NJI

TOR: 0611Z 18 JUL 62

IN 42936

25X1 to PRITY CITE 25X1

25X1 1. DISTRIBUTION THIS MESSAGE LIMITED TO THOSE WITH ABSOLUTE NEED TO KNOW.

2. MADE FOUR STARTS. THREE OTHER ATTEMPTS ABORTED DUE HSD CART CUT-OUT PREMATURELY. FIRST START WAS VERY RAPID AND WITHOUT TOUCHING FUEL CONTROL. THIS WAS FULLY AUTOMATIC OPERATION OF HSD CART. WHEN CART CUT-OUT ON SUBSEQUENT STARTS, CART OPERATION WAS SWITCHED TO MANUAL WITH A NOTICABLE DROP IN ENGINE ACCELERATION NOTED. THIS NECESSITATED "DOUBLE CLUTCHING" AT 2800 RPM RANGE. HSD REPRESENTATIVE BELIEVES HE DOES NOT GET FULL THROTTLE WHEN OPERATING IN MANUAL SYSTEM.

3. STARTER CART PROBE MICRO SWITCH WIRING DEVELOPED ONE OPEN WIRE, NECESSITATING JURY RIG. CART BEING WORKED ON TONIGHT IN ATTEMPT TO GET BACK ON AUTOMATIC CONTROL.

4. FIRST RUN TODAY SAME AS YESTERDAY EXCEPT OPERATION WAS WITH NORMAL TEST STAND FUEL SYSTEM. VIOLENT NOZZLE FLUTTER AGAIN OCCURRED AT NOZZLE CLOSING SPEED.

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(5.) SECOND RUN WITH HYDRAULIC PRESSURE GAGE DISCONNECTED AT ENGINE RESULTED IN SLIGHT NOZZLE OSCILATION DURING INITIAL CLOSE BUT WAS STABLE UP TO MILITARY POWER. ENGINE OBSERVED RPM VERY STABLE AT 6600 100% RPM. FUEL INLET PRESSURE REMAINED IN 50 PSIG RANGE AND ENGINE OPERATION WAS NORMAL.

6. ENGINE TRIMMED DOWN TO 1850 OBSERVED TT_4, TEB DUMP CHECKED OK. SHUT DOWN TO REMOVE HYDRAULIC GAGE DAMPERS AND INSTALL .040 ORIFICE IN GAGE LINE AT ENGINE CONNECTION.

(7.) NEXT RUN REPEATED SEVERE FLUTTER AT NOZZLE CLOSING CONDITIONS AND DID NOT ATTEMPT TO PUSH THROUGH. DISCONNECTED HYDRAULIC PRESSURE GAGE AND CAPPED AT ENGINE. THERE IS A DISTINCTLY AUDIBLE BUZZ IN THE HYDRAULIC GAGE LINE IN THE CONTROL ROOM AND CONSIDERABLE FINGER DISCOMFORT WHEN PRESSING LINE BETWEEN THUMB AND FOREFINGER.

(8.) FINAL RUN REPEATED SLIGHT NOZZLE FLUTTER OR HUNT DURING INITIAL CLOSING BUT WAS STABLE UP THRU 110 DEGREES PLA. Not max A/B AT 120 max A/B DEGREE PLA THE ENGINE WAS STABLE WITH THE NORMAL SLOW OSCILLATION OF NOZZLE TO MAINTAIN SPEED BUT EVERY 15 TO 30 SECONDS THERE WOULD OCCUR ONE OR TWO RAPID OSCILATIONS TO A CLOSED POSITION AND THEN RETURN TO STEADY OPERATION. REDUCING PLA AND NOZZLE AREA SLIGHTLY CORRECTED THIS CONDITION. IT WOULD APPEAR THAT THE NOZZLE IS UNSTABLE NEAR MAXIMUM AREA.

9. RAPID AND SNAP ACCELERATION AND DECELERATIONS FROM IDLE TO MILITARY AND MAX WERE SATISFACTORY. BLEED OPERATION WAS QUICK, NO EVIDENCE OF STALL NOTED DURING THROTTLE SNAPS. MAX ENGINE VIBRATION WAS 1.5 MILS TOTAL AMPLITUDE ON INLET CASE.

10. MILITARY TRIM NOT TOO RESPONSIVE

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DOWN, TT4 WENT TO 1850 DEGREES. RICHENED ONE AND ONE QUARTER TURNS TO 1960 DEGREES GAGE (1955 IS RATING). LEANED THREE QUARTER TURN, NO EFFECT. LEANED THREE QUARTER TURN MORE AND ONLY 15 TO 20 DEGREE EFFECT.

11. STAND CONTROLS AND FUEL SYSTEM OK. DISCONNECTED AUTOMATIC FUEL FARM PUMPS FROM LOW LEVEL SHUT-OFF SWITCH TO PROTECT ENGINE AND WILL INSTALL LOW LEVEL WARNING LITE ON CONTROL PANEL.

12. PLAN TO DEMONSTRATE ENGINE OPERATION TO BASE OFFICIALS AND OPERATING CREWS IN A.M. TESTS WILL BE COMPLETE AT THAT TIME AND ENGINE WILL BE AVAILABLE FOR INSTALLATION CHECKS OR MODERNIZATION. DAYS RUN TIME 1:28, TOTAL FIELD TIME 2:13, TOTAL TIME 21:32.

13. APPROXIMATELY HALF OF TODAYS OPERATING TIME AT OR ABOVE MILITARY.

25X1 14. REF [redacted] (IN 42788) ITEM 7; HAVE NOT RECEIVED ANSWER TO YESTERDAYS WIRE RELATIVE TO HYDRAULIC GAGE DAMPERS ETC. WHILE WE NO LONGER NEED THE INFORMATION WE NEED TO SPEED UP COMMUNICATION. THE OUT TIME ON THE REFERENCE WIRE WAS 6 P.M. LOCAL TIME 16 JULY. REQUEST PRIORITY ON THIS WIRE TO INSURE A.M. DELIVERY.

END OF MESSAGE

SECRET